The reliability of any test depends on the experience and competence of the user. Home tests have been significantly more accurate when used by older patients or those with higher incomes. The false-negative rate when used at a family planning clinic is lower (16.7%) than when used in a private office (21.1%) or a general public clinic (40.0%).

Monoclonal antibody testing now available for home and office will assist in earlier diagnosis. To improve accuracy, unless medically imperative, patients should be encouraged to wait longer than the six to nine days after the missed menstrual period that manufacturers recommend. Patients must be instructed in the proper technique, including the use of a morning's first urine. When used appropriately, home pregnancy tests enable patients to take increased responsibility for their own health care and minimize potential risks, such as exposure to drugs or irradiation during early pregnancy.

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REFERENCES

Asch RH, Asch B, Asch G, Asch M, Bray R, Rojas FJ: Performance and sensitivity of modern home pregnancy tests. Int J Fertil 1988; 33:154,157-158,161

Bluestein D: Monoclonal antibody pregnancy tests. Am Fam Physician 1988; 38:197-204

Hicks JM, Losefsohn M: Reliability of home pregnancy-test kits in the hands of laypersons (Letter). N Engl J Med 1989; 320:320-321

Immunization Update

MANY REVISED RECOMMENDATIONS for routine immunizations for children, adults, and certain high-risk groups have been published recently. For example, there are now new immunizations for children, and the schedule for routine immunizations has changed. The recent measles epidemic stimulated new recommendations for immunizing adults against measles. There are also new recommendations for certain high-risk groups, such as health care workers and patients with human immunodeficiency virus (HIV) infection.

Children

Originally the *Haemophilus influenzae* type b (Hib) vaccine was recommended for high-risk children at 18 months and all other children at 2 years of age. One *H influenzae* b conjugate vaccine (HibTITER, Lederle) is now available. This new immunization should be given at the 2-, 4-, and 6-month visits (with the oral attenuated poliovirus vaccine [OPV] and diphtheria and tetanus toxoids with pertussis vaccine [DTP]) with a booster at 15 months. Prophylactic acetaminophen administration decreases the systemic side effects of the DTP immunization in children. Other conjugated vaccines may soon be shown to be safe and effective for administration before 15 months of age. Measles immunization continues to be given in combination with mumps and rubella (MMR). Until recently they were given only at 15 months, but now they are given at both 15 months and 4 to 6 years. In areas of high risk, the MMR-1 should be given at 12 months of age. Finally, the 6-month dose of OPV can now be dropped in low-risk areas.

Adults

The influenza vaccine continues as a standard of medical practice to be considered for those with severe medical conditions (especially heart and lung disease), those older than 65, nursing home residents, immunocompromised patients (including people with the acquired immunodeficiency syndrome), and health care workers. All adults older than 65 years and patients with certain chronic medical conditions should receive the pneumococcal vaccine one time. Recent reports that at least 40% of persons 60 years of age and older are not adequately immunized against diphtheria and tetanus should lead to an increased use of the dT immunization.

Special Groups

Three groups deserve special attention. First, all health care providers, especially if they come in contact with bodily fluids, should consider the three-part immunization against hepatitis B. Travelers should contact a local traveler's clinic or the health department at least two months in advance to learn which immunizations are required and recommended for their trip. Finally, those with HIV infection should be up-to-date with their immunizations, especially dT and pneumococcal and possibly measles and influenza. Avoid the OPV vaccine in these immunocompromised patients; the trivalent enhanced-potency, inactivated poliovirus vaccine (IPV) is recommended instead.

A new system was started last year for physicians to report adverse reactions to vaccines. Further information on the Vaccine Adverse Event Reporting System (VAERS) is available 24 hours a day at 1-800-822-7967.

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REFERENCES

Centers for Disease Control: Food and Drug Administration approval of use of Haemophilus b conjugate vaccine for infants. MMWR 1990; 39:698-699

From the Centers for Disease Control: General recommendations on immunization. JAMA 1989; 262:339-340

Intrauterine Devices and Pelvic Inflammatory Disease—A Reanalysis of the Literature

INTRAUTERINE DEVICES (IUDs) are used less and less as a form of contraception in America. This is probably because of decreased marketing due to the litigation related to the Dalkon Shield. Additional concerns with IUDs include side effects of discomfort, increased bleeding, and the traditional belief that IUDs contribute to an increased incidence of pelvic inflammatory disease. There are two IUDs currently available in the United States. The Progestasert must be replaced every year and has a higher rate of ectopic pregnancy than other IUDs. The ParaGard (copper T 380A), a copper IUD, has a failure rate of about 3% and can be left in place for four years at a time.

All IUDs have an increased risk of pelvic inflammatory disease in the first 30 days. This is probably because of contamination of the uterine cavity during insertion. Other causes may include that the tail of the IUD allows bacteria to rise up the cervix and that the IUD will cause local inflammation in the area where it rests. For years, however, a belief has prevailed that IUD use leads to an increased risk of pelvic inflammatory disease after the first 30 days as well. This belief has recently been called into question. In cohort or prospective studies of women with IUDs, the risk of pelvic inflammatory disease was similar to that in sexually active women in industrial countries—about 1% to 2% in the 1970s. In a review of 17 case-control studies, it was found that these studies had often not corrected for oral contraceptive pill use in controls—that is, contraceptive pill use in controls may have provided protection from pelvic inflammatory disease.